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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Peter Astrup Simmelsgaard

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EXAMINER

BROWN II, DAVID N

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/579,554	Applicant(s) SIMMELSGAARD, PETER ASTRUP	
	Examiner DAVID N. BROWN II	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>05/16/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

This is a first action on the merits of the claims dated 5/16/2006.

Claim Objections

1. Claim 9 objected to because of the following informalities: There is lack of antecedent basis for the limitation "the third layer". Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 6-8, 10-17 are rejected under 35 U.S.C. 102(b) as being anticipated by US 3,874,140 (Seehusen).

Claims 1, 14 and 16:

Seehusen teaches a method for the production of a concrete article having a pattern on a surface thereof. Seehusen also teaches providing a mould (column 2 lines 4-9), having upstanding side walls (column 2 lines 5-9), and a bottom surface which is patterned with a reverse image of the pattern desired on the surface of the article (sculpted granular bed, column 2 line 49). Seehusen teaches first adding an aggregate (objects in such bed, column 2 lines 48-49, decorative surface objects column 3 lines 17-19 also Seehusen claim 2) to the mold. Next Seehusen teaches the addition of the mortar (column 2 lines 46-50, column 3 lines 24-35). Seehusen teaches a second layer of concrete (column 5 lines 24-28). Seehusen teaches demolding the article (column 2

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lines 39-44, column 5 lines 28-30). Seehusen teaches separating the side walls of the mold (column 5 lines 25-31). Since workmen may then add steel bars to the mixture, it is in a partially uncured state (column 5 lines 18-19) Seehusen teaches compacting the first layer (column 5 lines 16-19) and compacting the second layer (column 5 lines 52-55).

Claim 6:

The aggregate layer is sand. It has no binder particles.

Claim 7:

$$D_{H_2O} = 1g / ml$$

$$25gal = 9.5 \bullet 10^4 ml$$

$$H_2O = 9.5 \bullet 10^4 g$$

$$100lbs = 4.5 \bullet 10^4 g$$

$$slurry = 9.5 \bullet 10^4 g + 4.5 \bullet 10^4 g$$

$$slurry = 1.4 \bullet 10^5 g$$

$$D_{sand} = 1.6g / ml$$

$$5ft^3 = 1.4 \bullet 10^5 ml$$

$$sand = 2.2 \bullet 10^5 g$$

(Seehusen column 4 lines 53-64)

Claim 8:

Seehusen teaches compacting the first layer (column 2 lines 33-36), and the second layer (column 5 lines 52-55)

Claim 10:

Seehusen teaches partial curing before the addition of the second layer (column 2 lines 33-36).

Claim 11:

Seehusen teaches the use of large facing stones (column 5 lines 61-63), sand, or gravel (column 5 lines 56-60). Seehusen is silent as to the composition of the second concrete

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layer. Supposing the second concrete layer has a like consistency from example to example, the change in the size of the particles in the first layer would constitute a different size distribution. It would have been obvious to one having ordinary skill in the art at the time of the invention to choose from a limited number of choices.

Claim 12:

It is also possible that within these limited number of choices, there exists one where the composition of the first layer matches the composition of the second layer. It would have been obvious to one having ordinary skill in the art at the time of the invention to choose from such a limited amount of choices.

Claim 13:

Applicant defines a paver as a slab, block, or tile. Seehusen teaches the formation of a finished cast panel (column 5 lines 31-36).

Claim 15:

Seehusen teaches first adding a sand layer (an aggregate) to the mold (column 2 lines 13-15). Seehusen teaches the formation of a finished cast panel (column 5 lines 31-36).

Claim 17:

Seehusen teaches the provision of partially embedded keying elements (column 3 lines 58-65).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over US

3,874,140 (Seehusen) in view of US 4,160,003 (Kozuka).

Claim 2:

Seehusen teaches the molding of a product with more than one layer. Seehusen does not teach that the molding of the product comprises steps in which the rim is used to mold the first layer and side walls are added later. Figure 14 of Kozuka shows the slurry layer (47) applied to the mold where the side walls are not present. Figure 15 of Kozuka shows a mold having the side walls attached. Figure 16 also shows the aggregate layer being poured into the mold after the side walls are in place. Kozuka also teaches separating the material from the mold upon partial curing (column 8 lines 55-58). Figure 16 shows the mold with a rim and side walls, figure 17 shows the side walls removed. Thus the combined invention teaches the removal of the side walls. Seehusen and Kozuka are dedicated to the formation of concrete articles. It would have been obvious to one having ordinary skill in the art at the time of the invention to assemble the mold in a stepwise fashion in order to create both layers (Kozuka column 8 lines 45-54).

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4. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,874,140 (Seehusen) in view of US 4,160,003 (Kozuka) in further view of US 2,098,929 (Barnes).

Claim 3:

Seehusen teaches the formation of a patterned mold to be used in such a concrete casting operation. Seehusen teaches disassembling the mold after use such that the mold may be re-used (column 5 lines 25-31). Seehusen does not provide a contiguous plurality of molds. Barnes, in another concrete molding operation, teaches such. Figure 1 of Barnes is a disassembled mold; figure 2 is an assembled mold having a contiguous plurality of molds. Figure 4 of Barnes shows the mold being disassembled. It would have been obvious to one having ordinary skill in the art at the time of the invention to use a contiguous plurality of molds as Barnes in the invention of Seehusen. Seehusen seeks to reuse the mold to create a plurality of tiles. Barnes provides a way to make several tiles at once.

Claim 4:

Barnes teaches the use of a trowel as a cutting tool to level the concrete while it is curing (column 2 lines 32-46).

Claim 5:

Seehusen teaches disengaging the mold while the second layer of material is partially cured (column 54 lines 25-30).

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over US 3,874,140 (Seehusen) in view of US 4,995,932 (Yoshida).

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Seehusen does not teach compacting the material by using vibration. Such a method is well known in the art. Nevertheless, Yoshida teaches the use of vibration to densify the product (column 4 lines 49-55). It would have been obvious to one having ordinary skill in the art at the time of the invention to use a vibration compacting means in the invention of Seehusen motivated by a desire to compact, densify, and remove voids from the product.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID N. BROWN II whose telephone number is (571)270-5497. The examiner can normally be reached on Monday-Thursday 7:30a-5:00p EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Del Sole can be reached on (571)-272-1130. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/DAVID N. BROWN II/
Examiner, Art Unit 1791

/Joseph S. Del Sole/
Supervisory Patent Examiner, Art Unit 1791